Nature Conservation 46: 41–48 (2022)
doi: 10.3897/natureconservation.46.80064
https://natureconservation.pensoft.net

SHORT COMMUNICATION

A peer-reviewed open-access journal
Nature Conservation
Launched to accelerate biodiversity conservation

Online trade as a serious additional threat to the Critically Endangered silvery pigeon *Columba argentina* in Indonesia

Simon Bruslund[1,2], Boyd Leupen[2,3], Chris R. Shepherd[2,3], S. Sunny Nelson[2,4]

1 *Zoologischer Garten Rostock gGmbH, Rostock, Germany* **2** *IUCN Species Survival Commission Pigeon and Dove Specialist Group, Switzerland* **3** *Monitor Conservation Research Society, Big Lake Ranch, Canada* **4** *Lincoln Park Zoo, Chicago, USA*

Corresponding author: Simon Bruslund (s.bruslund@zoo-rostock.de)

Academic editor: Mark Auliya | Received 3 January 2022 | Accepted 24 January 2022 | Published 22 February 2022

http://zoobank.org/7E815F90-A09C-4EA4-9E43-A768B5E57A13

Citation: Bruslund S, Leupen B, Shepherd CR, Nelson SS (2022) Emerging online trade as a serious additional threat to the Critically Endangered silvery pigeon *Columba argentina* in Indonesia. Nature Conservation 46: 41–48. https://doi.org/10.3897/natureconservation.46.80064

Abstract

The elusive and Critically Endangered silvery pigeon *Columba argentina* is only found on small offshore islands in western Indonesia and Malaysia. Historically, trade records have suggested that, in addition to habitat degradation and invasive predators, commercial exploitation could be a threat to the species. The current study confirms this to be the case, with a relatively high volume of silvery pigeons found offered for sale on social media platforms in Indonesia between October and December 2021. The trade numbers (at least 10 individuals) observed within this short period exceeded 20% of the global silvery pigeon population according to the latest Red List assessment, suggesting that actual population numbers may be larger than previously thought but also confirming that trade poses a considerable threat. Some of the recorded posts were in new areas within the species' presumed range, further suggesting that the population may be slightly larger than hitherto assessed. The reported trade observations are reason for grave concern, particularly given the potential interest of international collectors which could further drive demand and increase prices. Due to the locations of the observed online trade we recommend timely field surveys to confirm the species' presence and current status, particularly in the Riau-Lingga island group, as well as the development of a species conservation action plan to catalyse local and regional efforts to tackle the current illegal trade and work towards the regulation of international trade.

Keywords

CITES, illegal wildlife trade, social media, species conservation action plan

Copyright *Simon Bruslund et al.* This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Distribution and status

The silvery pigeon *Columba argentina* is found in western Indonesia and Malaysia, exclusively on coastal islands and small archipelagos off Sumatra, Kalimantan, Peninsular Malaysia and Sarawak. The proximity of the species' suggested range to Singapore and Brunei makes occurrence in either country plausible but no current or historical records could be found (Collar et al. 2001; Yong 2009; BirdLife International 2019). Recent records of the species are only from islands off the west coast of Sumatra, including Simeulue, Nias and the Mentawai islands (Yong 2009; Eaton and Rossouw 2011; Svensson and Yong 2016; Rheindt et al. 2020; M. Iqbal pers. comm. 2021). There are no recent reports of sightings in other parts of the species' range, including the Riau-Lingga island group between Singapore and the south-east coast of Sumatra, and Natuna off West Kalimantan.

The silvery pigeon has been assessed as Critically Endangered by the IUCN Red List of Threatened Species (hereafter Red List) since 2000 (BirdLife International 2019). Until the late 2000s, the species was speculated to be extinct following a 70-year absence of definite records (Svensson and Yong 2016). The entire silvery pigeon population is currently estimated to consist of 1–49 individuals (BirdLife International 2019). However, considering possible misidentification of silvery pigeons during past population surveys in which the species may have been mistaken for the sympatric and superficially similar pied imperial pigeon *Ducula bicolor*, actual population numbers may be higher than previously thought. Recent surveys have already identified further remnant populations and made suggestions to revise the population estimates upwards (Rheindt et al. 2020). These surveys have mostly focused on islands off the west coast of Sumatra (Rheindt et al. 2020; M. Iqbal pers. comm. 2021) and future research on other islands may uncover more birds of the species. The total population is nevertheless anticipated to be small and at risk (BirdLife International 2019). Considering this and the fact that the population is distributed over a relatively large disjunct area, any threats, which include habitat degradation, trade, and the introduction of invasive predators, are a cause for high concern.

Legislation

In 2018, the species received full protection in Indonesia under the Regulation of the Minister of Environment and Forestry No. P.20/MENLHK/SETJEN/KUM.1/6/2018, which it continues to have under the current No. P.106/MENLHK/SETJEN/KUM1.1/12/2018. Any harvest, trade, transportation (including export) or possession of wild-caught silvery pigeons is therefore punishable by law, with penalties of up to IDR100,000,000 (USD6,922 in December 2021) and/or up to five years imprisonment under the Act of the Republic of Indonesia (No.5) of 1990 concerning Conservation of Living Resources and their Ecosystems. Silvery pigeons are also nationally protected in Malaysia but are not known to be protected in other countries. The species is not listed in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), meaning that international trade is unregulated from a conservation perspective.

Historic trade

While trade and trapping records are scarce, the species has been previously reported in three instances. Nash (1993) recorded an unspecified number of silvery pigeons for sale in Indonesia and Singapore during surveys of bird markets across Southeast Asia between 1991 and 1993. Lee et al. (2009) reported on a photograph of two captive silvery pigeons in a Hong Kong SAR aviary (Lam 2000), but efforts to investigate the fate of these birds or track their origin proved futile (N. Collar pers. comm. 2021). In June 2016, two birds were reportedly trapped in Nias Selatan (South Nias Regency), constituting the first record of the species on Nias island (Svensson and Yong 2016). These two individuals were subsequently placed in an aviary in the Museum Pusaka Nias (Nias Heritage Museum) in Gunungsitoli. In 2019, SB witnessed another case of trapping, reportedly from the West Nias Regency, involving two injured birds which were also placed in the Museum Pusaka Nias by oversight of local authorities.

Current trade

On 2 December 2021, a post advertising two silvery pigeons, including photos and videos (see Fig. 1A), was placed in a closed Indonesian pigeon and dove hobbyist Facebook group. Within a single day, the post had received considerable positive attention with dozens of comments and likes from international users, including from Korea and Qatar, as well as local Indonesian group members. The original post did not mention prices or the location of the birds. After contacting the seller and enquiring about the birds it was found that they were in Padang, Sumatra, with their price being a moderate IDR900,000 (USD63 in December 2021) for the pair including their transport to Java. Padang is a regular port for ships from Siberut island where the species has previously been recorded (Yong 2009). This is not an unusual price asked for rare species sent to collectors in Java, but the asking price does not necessarily suggest a very high current demand (Putri et al. 2021). We also received a video from the seller showing the birds in relatively poor plumage, suggesting a recent capture and/or inappropriate holding conditions (see Fig. 1B).

Following the initial post, other images were posted in the same social media thread showing another captured silvery pigeon in Singkep island in the Riau islands (see Fig. 1D). On further investigation, yet another social media video was discovered that had been posted by a pet shop owner from Bintan island, also in the Riau islands, in October 2021. This video showed a caged group of pied imperial pigeons and green imperial pigeons *Ducula aenea*. Among these birds were at least seven silvery pigeons which were not mentioned by the seller, perhaps due to misidentification (see Fig. 1C, Suppl. material 1–4). From the two latter sources four videos were secured. These were posted between 6 October and 22 December 2021 and appear to have been recorded in three different locations (see Fig. 1C, E, Suppl. materials 1–4).

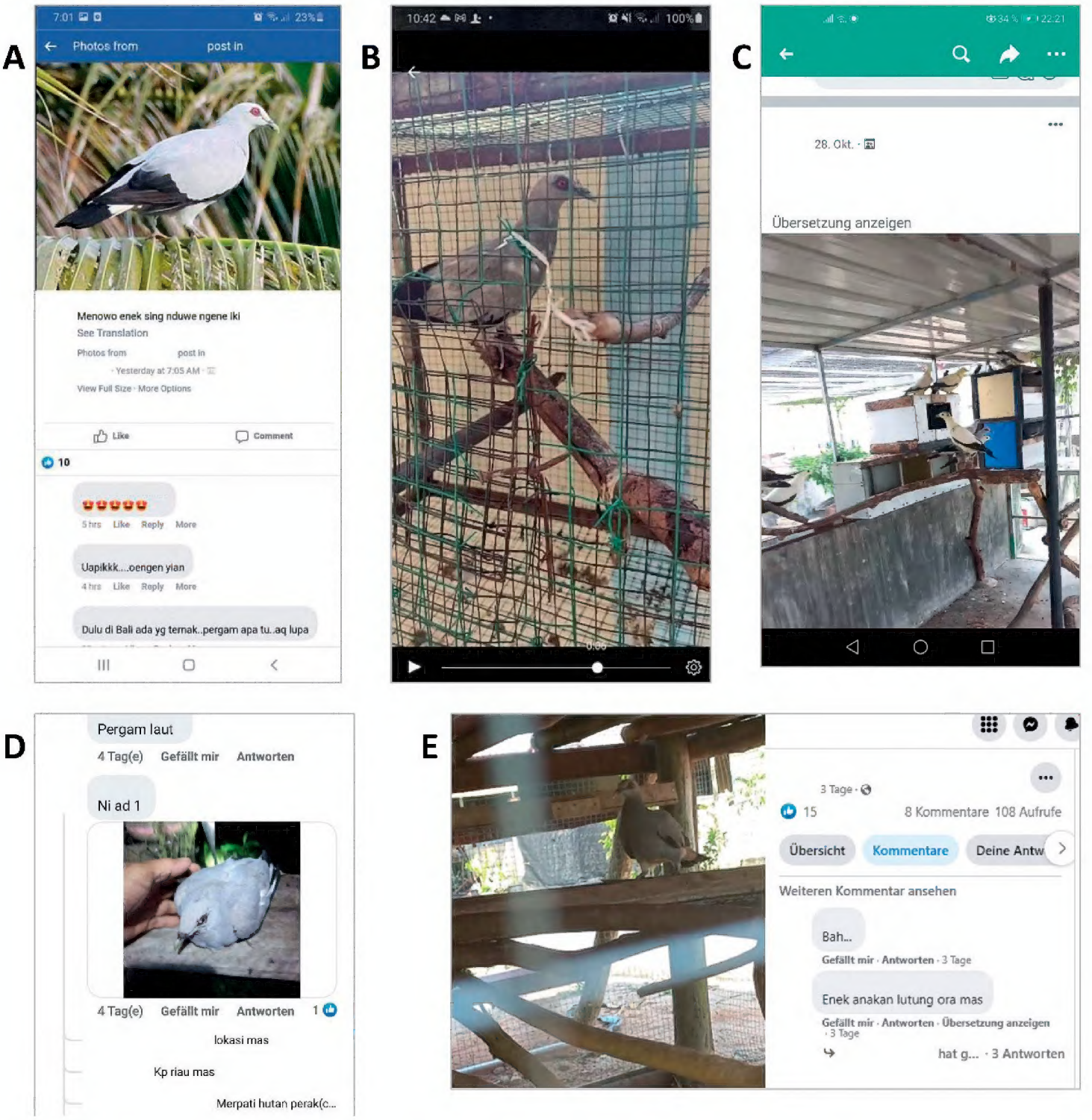

Figure 1. Screenshots of social media posts offering silvery pigeons between October and December 2021 **A** initial post discovered **B** screenshot of a video provided by a seller from Padang (province of West Sumatra) showing one of the two silvery pigeons from the initial post (1A) **C** screenshot of one of two videos posted by a seller in Bintan island (Riau archipelago, Indonesia); the videos from this setting are poor in quality and show 7–10 silvery pigeons in a cage with a larger group of pied imperial pigeons and one green imperial pigeon **D** image from a comment to the initial post (1A), from Singkep island (Lingga archipelago, Indonesia), showing an additional silvery pigeon. A further video posted by this person shows a single silvery pigeon with a larger group of pied imperial pigeons in a cage, potentially the same bird as in 1D (see Suppl. material 1–4) **E** screenshot of a video posted in December 2021 showing a single silvery pigeon with a group of green imperial pigeons and three pied imperial pigeons in a cage in Bintan island posted by the same person as in 1C but seem to be in a different setting (see Suppl. material 1–4).

These recent observations of at least 10 silvery pigeons advertised for sale on social media platforms by three different Indonesian vendors within a short period of time between October and December 2021 are of grave concern. Considering the species' conservation status and population size, any trapping for trade must be considered a serious threat to

the survival of the species (Lee et al. 2009; Eaton et al. 2015). In addition to depleting local populations, commercial illegal exploitation may disrupt the natural connectivity between subpopulations by eliminating individual "stepstone populations" between breeding colonies, which would further threaten these rare birds. If trade interests continue to intensify domestically and/or abroad, the risk trade poses will increase even further.

Although some limited historical trade, including internationally, has been reported (Lee et al. 2009), no successful captive breeding of silvery pigeons has ever been reported and there is currently no indication of captive populations existing outside of Indonesia. This is significant as some regions already have regulations in place that would prevent legal imports of the species, e.g., the US Lacey Act and the EU Import Ban on Wild Birds. However, once birds enter such regions through illegal border crossings, there is no legislation in place to curb commercial exploitation within those regions (Heinrich et al. 2021).

Recommendations

Organisations in Indonesia monitoring and investigating the trade in birds should be aware of silvery pigeons in trade and report observations to the relevant authorities such as the BKSDA Balai Konservasi Sumber Daya Alam (Indonesian Nature Conservation Agency) and other organisations monitoring the bird trade. Coordinated efforts to raise awareness of this issue should be prioritised.

The relevant authorities in Indonesia are encouraged to deter the illegal exploitation of silvery pigeons by taking strong action against anyone found poaching, trading, buying or illegally keeping silvery pigeons.

Given the species has been observed historically in international trade in Singapore and in a private collection in Hong Kong, and knowing that other protected species from Indonesia are smuggled and trafficked into other parts of the world for private collections and for commercial exploitation (Nijman and Stoner 2014; Heinrich et al. 2021), listing the silvery pigeon immediately in Appendix III of CITES, and proposing a listing in Appendix I, would help prevent further international trade in illegally sourced birds. A CITES Appendix III listing can be realised unilaterally by any range country and would allow for better documentation and monitoring of international trade in the period leading up to a possible CITES Appendix I listing which would prohibit any commercial trade in the species. Additionally, pied imperial pigeons should also be considered for a CITES II listing due to their resemblance to silvery pigeons (see Article II, paragraph 2b of the Convention (CITES 1973) and Annex 2b, paragraph A of Resolution Conf. 9.24 (Rev. CoP17) (CITES 2016)). In addition to immediate documentation and legal protection, a CITES listing would bring much-needed attention to the conservation of the silvery pigeon and may also help promote the enforcement of existing national legislation to protect the species in Indonesia.

The apparently increasing online trade and international attention is a cause of great concern. It is feared that, when trade moves from being localised and opportunistic towards being specialised and targeted, there will be a plausible risk of the

trade volume increasing. The illega online trade has proven to be resilient against law enforcement and current COVID-19 restrictions (Morcatty et al. 2021). We anticipate that prices within Indonesia will increase. We also anticipate that subsequent to the new trade activities documented here, silvery pigeons will be entering the international trade spheres imminently and are likely to appear in unregulated trade incidents involving specialised collectors in Asia, Europe, and Middle East. These regions can also make use of national or regional regulations such as Annex B or C listings under the EU Wildlife Trade Regulations to reduce any demand for this Critically Endangered species.

We recommend that plausible sites, particularly within the Riau-Lingga island group, be thoroughly surveyed for the presence of silvery pigeons and urge that a strategy in the form of a species action plan, involving all relevant stakeholders, be developed to support enforcement efforts where illegal trade in silvery pigeons is detected. Additionally, protocols for release or for placement in conservation breeding centres should be created. Organisations monitoring the bird trade should be vigilant and openly share reports on all observations of trade in this species with the relevant authorities, international conservation agencies and the IUCN SSC Pigeon and Dove Specialist Group.

Acknowledgements

We are grateful to Jochen Menner for reporting an online trade event and bringing attention to this issue. James Eaton and Mohamad Iqbal as species experts verified the species identification and provided valuable feedback on the early manuscript. We are also grateful for the constructive feedback from Nigel Collar and Vincent Nijman which improved the manuscript and underlined the importance of these observations.

References

BirdLife International (2019) *Columba argentina*. The IUCN Red List of Threatened Species 2021: e.T22690195A155300126. https://dx.doi.org/10.2305/IUCN.UK.20193.RLTS.T22690195A155300126.en [Accessed on 05.12.2021]

CITES (1973) Text of the Convention. Available at: Convention on International Trade in Endangered Species of Wild Fauna and Flora | CITES.

CITES (2016) Resolution Conf. 9.24 (Rev. CoP17) Criteria for amendment of Appendices I and II. https://cites.org/sites/default/files/document/E-Res-09-24-R17.pdf

Collar NJ, Andreev AV, Chan S, Crosby MJ, Subramanya S, Tobias JA (2001) Threatened birds of Asia: the BirdLife International Red Data Book. (Third edition, part 3). BirdLife International, Cambridge.

Eaton J, Rossouw J (2011) Little-known Asian bird: Silvery Pigeon *Columba argentina* on Simeulue and the Batu islands, Sumatra, Indonesia. BirdingASIA 15: 78–79.

Eaton JA, Shepherd CR, Rheindt FE, Harris JBC, van Balen SB, Wilcove DS, Collar NJ (2015) Trade-driven extinctions and near-extinctions of avian taxa in Sundaic Indonesia. Forktail 31: 1–12.

Heinrich S, Leupen BTC, Bruslund S, Owen A, Shepherd CR (2021) A case for better international protection of the Sumatran Laughingthrush (*Garrulax bicolor*). Global Ecology and Conservation 25: e01414. https://doi.org/10.1016/j.gecco.2020.e01414

Lam C (2000) Borneo Bird Images: Silvery Pigeon. http://www.borneobirdimages.com/bird/silvery_pigeon/6147

Lee MT, Yong DL, Ong TP (2009) A photographic record of Silvery Pigeon *Columba argentina* from the Mentawai Islands, Indonesia, with notes on identification, distribution and conservation. Bulletin of the British Ornithologists' Club 129(3): 122–128.

Morcatty TQ, Feddema K, Nekaris KAI, Nijman V (2021) Online trade in wildlife and the lack of response to COVID-19. Environmental Research 193: e110439. https://doi.org/10.1016/j.envres.2020.110439

Nash SV (1993) Sold for a song: the trade in Southeast Asian non-CITES birds. TRAFFIC, Cambridge.

Nijman V, Stoner S (2014) Keeping an ear to the ground: Monitoring the trade in earless monitor lizards. TRAFFIC, Petaling Jaya, Malaysia.

Putri FK, Alicia F, Noven HJ, Sholiqin M, Himawan W, Javarendra RA, Liza N, Partasasmita R, Iskandar J, Naim DMD, Setyawan AD (2021) Conservation implication and traditional ecological knowledge on trading bird: A case study in Depok bird market in Surakarta, Central Java, Indonesia. Biodiversitas Journal of Biological Diversity 22(12): 5636–5648.

Rheindt FE, Gwee CY, Baveja P, Ferasyi TR, Nurza A, Rosa TS, Haminuddin (2020) A taxonomic and conservation re-appraisal of all the birds on the island of Nias. The Raffles Bulletin of Zoology 68: 496–528.

Svensson B, Yong DL (2016) First record of the Critically Endangered Silvery Pigeon *Columba argentina* from Nias Island, Sumatra, Indonesia. BirdingASIA 26: 73–75.

Yong DL (2009) Notes on the status and identification of the Silvery Pigeon *Columba argentina*. BirdingASIA 11: 53–58.

Supplementary material 1

Video 1

Authors: Simon Bruslund, Boyd Leupen, Chris R. Shepherd, S. Sunny Nelson

Data type: multimedia

Explanation note: Observations of silvery pigeons in trade.

Copyright notice: This dataset is made available under the Open Database License (http://opendatacommons.org/licenses/odbl/1.0/). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.

Link: https://doi.org/10.3897/natureconservation.46.80064.suppl1

Supplementary material 2

Video 2
Authors: Simon Bruslund, Boyd Leupen, Chris R. Shepherd, S. Sunny Nelson
Data type: multimedia
Explanation note: Observations of silvery pigeons in trade.
Copyright notice: This dataset is made available under the Open Database License (http://opendatacommons.org/licenses/odbl/1.0/). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.
Link: https://doi.org/10.3897/natureconservation.46.80064.suppl2

Supplementary material 3

Video 3
Authors: Simon Bruslund, Boyd Leupen, Chris R. Shepherd, S. Sunny Nelson
Data type: multimedia
Explanation note: Observations of silvery pigeons in trade.
Copyright notice: This dataset is made available under the Open Database License (http://opendatacommons.org/licenses/odbl/1.0/). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.
Link: https://doi.org/10.3897/natureconservation.46.80064.suppl3

Supplementary material 4

Video 4
Authors: Simon Bruslund, Boyd Leupen, Chris R. Shepherd, S. Sunny Nelson
Data type: multimedia
Explanation note: Observations of silvery pigeons in trade.
Copyright notice: This dataset is made available under the Open Database License (http://opendatacommons.org/licenses/odbl/1.0/). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.
Link: https://doi.org/10.3897/natureconservation.46.80064.suppl4